RECORD

F

65-2

X

add 14° for True Bear-

LOC. [illegible] 60

W ½, NE ¼, Sec 2, T143N, R90W.
Co. Mercer Co.

	SECTION STARTS IN SV. [illegible]
0	[illegible] VALLEY FM. LM, [illegible]
	[illegible] NG [illegible] ~~St~~ M, [illegible]
	2.5 SAME WITH fr. col now SY 4.5/1
	3' UNIT [illegible] SILTS [illegible]
	4' UNIT [illegible] SAME [illegible] 5/1
	[illegible] 5Y 7.5/1
	[illegible] CLAY [illegible] Pl fr. [illegible]

6.1 [illegible] 10YR 6/2
[illegible] across [illegible]
upward
fr col 5YR 5/1
[illegible]

6.3 [illegible] 10.2 N 7
[illegible] fine
[illegible]
[illegible] fragments
Gymno[illegible] (GLYPTOSTROBUS
[illegible] GYPSIS.

7.2 A [illegible] 5/1
with some
[illegible] of SHAPES AT
6.3. [illegible] fragments
[illegible]
[illegible] GYPSIS

7.1 LIGNITE & GRASS looking
[illegible] CLAY 5YR 2.5/1
Grading upward PAST
10.4 TO →
MIDDLE ORANGE.

10.4 N.7 VERY SILTY CLAY
10.4 CLAYEY 10YR 4/6 MOTTLING

N3

Wh. color

Some CARB TRASH.

19.5 SIL PLASTIC

CLAY

[illegible]

20 7. [illegible]

V. M.
5 V b/3 [illegible]

[illegible] 21 [illegible] 1/1
[illegible] V+y SA 20
[illegible]
[illegible]
[illegible] 20 - 2 1/3 LATERALS
[illegible]

23. 2 [illegible] SA
[illegible]

35 MASSIVE [illegible]
[illegible]
wh. [illegible]
a7' do [illegible]

[illegible]
[illegible] do [illegible]

[illegible] [illegible]
CONT WITH A
[illegible] [illegible]
10YR4/3 [illegible]
[illegible] SILT
[illegible] [illegible]

wh color 5Y7/2

[illegible]
[illegible]
[illegible] 5Y5/1.
wh [illegible] 5Y5/2

34.2 [illegible], fr. SA. 2TON BL
5Y5/2 WITH 10YR5/1

[illegible]

[illegible]

[illegible] 1/2 [illegible], [illegible]
[illegible] CLAY [illegible]

36.5 [illegible] do 2/2

41. do. 36.5'

43 [illegible] N1 + [illegible]

44. [illegible] 3Y4/1
with [illegible]
[illegible] 5Y8/1
[illegible]
46.5 [illegible]
[illegible]

51 NO [illegible]
52 somewhat [illegible] CLAY
54.4. CLAYEY, [illegible], very
[illegible] 5Y5/1
[illegible]
[illegible]

Wh. Color 51 - Top.

25'
60'
85'
90'
95'
100'

[illegible] 5'8½ [illegible] of [illegible] calcen.

[illegible] well

[illegible] red building

[illegible] covered

[illegible] left [illegible]

120' [illegible] of [illegible]

120' [illegible] of [illegible]

X

X [illegible] from 110'
1. 210° Dip 5°-24°5

254°
-9

July 20 1907

6662 Horse Nose Butte NE, NW
Sec 14, T 144 N, R 92 W
[illegible] chg. wh. color

S. Dunn C.

[illegible] TAPTS [illegible]
Lt. Grey [illegible] [illegible]

0' Lower Grey
SILTY, SOFT, [illegible], massive
somewhat [illegible] in
CLAY
Wh. color 9-8 10YR 6/2
with [illegible] [illegible] ST.
of 10YR 3/4
11' Clayey [illegible]
[illegible] [illegible] [illegible]
[illegible] " " "

[illegible]

9' False base of [illegible]
massive SILTY CLAY with
"Jarosite" pods
Col. 5 Y 5/2 mottled with
5 YR 4/1 & Lt. 5 Y 8/6

Wh. Color 9-19
10YR 7/2 with Lim
Joint Bands of 10YR 6/6

13.8 5Y 5/6 SILTY MASS. CLAY
This unit very local.

15' do 9'
17' Sl. SILTY clay 2th w. do 9'
19' SILTY MASS. N-7 CLAY
Lh. color 19.3-27.2
5Y 5/1 (main) [illegible]
5Y 4/1 & 10YR 5/2
21' CLAYey 10YR 5/2 SILTST
23' Sl. SILTY MASSIVE 10YR 6/2 CLAY.
24 do 23'
25.5 Sl. SILTY [illegible]
5Y 4.5/1 CLAY
27' SILTY MASSIVE N5 CLAY
[illegible] 25.2-27.9 N4
27.5 N5 Sl. SILTY MASSIVE
Chippy carb. sh.

29.2 ACTUAL base M.O.
10YR 5/2 MASSIVE CLAY
WITH SILTY [illegible]
[illegible]
5YR [illegible]/1 with 5Y 7/2

✓

30. 2YR 7/1 fr & wh SILTST.
[illegible]
in fr. & wh. SECTION
5Y [illegible] fr. & 5YR 6/6

[illegible] SILTST
[illegible]
wh. color [illegible]
2YR 7/1 & 10YR 8/6

Upper LAV.

32.9 5YR 7/1 MASSIVE [illegible] SILTST
wh & color 5Y 7/1
35.8 [illegible] SILTST. 5Y 6/1
37. [illegible] INTO
a [illegible] SH. [illegible] 7/1
sh. (2 ft [illegible])

37.9 [illegible] but [illegible]
[illegible] BLACK LIGNITE
[illegible] (ALAMO Bluff Lig)

Upper Mbr.

38.3 5Y 3/2 fissile very [illegible]
pure clay.
39. do. 38.3 but color now
5Y 5/2

✓

[illegible]9.3 → Limonite rem. siltst ledges begin to appear in clay of 3613 (Gypsiferous)

Wh. color at top
5Y 7/2

[illegible]1.5 → fissle siltst grading into ss. color 5Y 7/2

[illegible]2.3 Vfg. mic, [illegible] clayey ss. laterally [illegible] a zone of well calc, cem x pedal [illegible] conc. Top of these concs at [illegible]3.1
[illegible], fissle clayey 2% mic ss bedded, unind.
Color. 5Y 7/2

[illegible]1 Top of section in [illegible] but [illegible] Aht [illegible] Cob. [illegible] by [illegible]

6563 N.W. NE, Sec. 31, T. [illegible] N. [illegible]
A short G.V. Sec. [illegible]
showing no m. orange
[illegible] of L.G. with a few
[illegible]

[illegible] similar [illegible]
to that of No. 6562

It is some possible
there is a short [illegible]
on [illegible]

P. Dum.

✓

2V 55 U. n. S.
Dexter Sec 6. T144N
R91W, Dunn Co.

Calc ccm med gr, x bedding
SA, SS. well ind bedding
[illegible] at [illegible]
[illegible] above those of Loc.
6556.

ATTITUDES ON X bedding

	326 - 312	N19°		56
	356 - 242	N		~~[illegible]~~ 86
	358 - 344	N		88
b	15° - 1°	N		285
	350 - 331°	N		80
b	16 - 2[illegible]	N		286
	365 - 351	N		95
	343 - 324	N		73
	366 - 352	N		96
	348 - 331	N		78

Loc 1000' FEET

AV	A + B	122.3 [illegible]
AV	B	285.5
AV	A	81.5

20c [illegible]

[illegible]

flat [illegible] [illegible]

[illegible] well [illegible]

[illegible] with

[illegible]

fr. [illegible]

gr. size fine to med.

20d 70 [illegible]

65 [illegible]

A pit with [illegible]

[illegible]

V. m. [illegible]

[illegible]

[illegible]

[illegible] of [illegible] [illegible] m.o
mo' pr. [illegible] LITHIC SS.

		ATITUDES	vector
7	333	319° N 17°	63
A	325	311° N	55
B	239	225° S	329
B	245	231° S	335
A	325	311° N	55

Av. A (3) — 57.6
Av B (2) — 332.0

6563 NW¼, Sec 5, T14N, R9W

6563. N. end of WHITE BUTTE
Slope 20

Ledges of F.U. xbedded
roller SS. ARKOSE &
NON MICACEOUS
Dip is ABT 5° E from
top of BLACK BUTTE

is interbedded in a sequence
of F.U. [illegible]
6563 a - SS
6563 b - purplish SS

SS. Ledges are interbedded
with and underlain by
typical F.U. Shs.

6564 N. End of Wh. Butte
Slope Co.

[illegible]
bedded SS [illegible]
BLACK BUTTE
[illegible]

SS. Then [illegible]
[illegible]
[illegible]
[illegible]
Color. fr. 10YR [illegible] w. [illegible]
[illegible] showing [illegible]
of [illegible]

7/24/65

Wh color 10YR6/6

6565 SE Corner of EAST BRINK BUTTE
NEB Hybrids Dio mic, PAOhnitic, fg, SA, CLAYEY SS, Resembling V.m. OV SS IN TUFT. VALLEY IN A BALD PATCH 100' of Slope of BUTTE.
Wh, Color 5Y8/1

6566

N. Mountrail Co.
Central portion G. V. outcrop
E. bank White ~~Knife~~ Earth River

M.O. takes up whole l.m.
sect. except for 4 ft.
lav. l.m. thick due to
channeling.
Pict. of channel contact
G.V. - f.U. Dips. N.
G.V. l. m. thinner N.
due to rise of channel.

6567 G.V. section

7/28/66

6567 MOST NORTHERN OUTCROP IN
NW, NW, Sec 29, T 158N, R 93W, N. Mountrail

[illegible]

Fort Union Fm
[illegible]
CLAYS [illegible]
[illegible]

[illegible]
SYC/1 [illegible]
SILTSTONE.
[illegible] - 9
SYC.5/1

2 Lignite & Lignitic Sh

[illegible]/1 [illegible]
[illegible]

2 [illegible]

[illegible]

[illegible] MAKING UP ABT 50% [illegible] REMAINS SHOW SOME [illegible] FILL AS [illegible]

[illegible]

[illegible]

Lower Green

6.7. [illegible]

Fissel [illegible]

Diatom

Glyptotrophal

Foraminifera

Ostracod

5YR 3/2 color.

[illegible] Color. 9-14 5YR 7/1

9 [illegible] CLAY

[illegible]

[illegible]

[illegible] MASSIVE

[illegible]

[illegible] 1/2"

~~Occ. [illegible] 15~~

Occ. [illegible] IT TO

15.2.

15. N7 MASSIVE SI. SILTY

CLAY.

17' SILTST COLOR 10YR6/2

1/1W carb [illegible] at cont of M.O.

[illegible] | [illegible] change
Whole unit is [illegible]
[illegible]
steep cliff.
Massive clay N7.

[illegible] | ~~thick~~ [illegible]
[illegible]
[illegible]
[illegible]

[illegible]

[illegible]

Wk.

22.5 [illegible]
Conc [illegible] on.
[illegible]

[illegible] UP TO [illegible]
[illegible] 1/2 [illegible]
[illegible]

[illegible] 22.5 - 33.3
[illegible]

25 [illegible] AT 22.5

[illegible] CLAY [illegible] AT [illegible]

[illegible] CLAY [illegible] AT [illegible]

[illegible] CLAY [illegible]

32.2 [illegible] CLAY [illegible]

[illegible] 33.3 - [illegible]
mottling of 10YR 8/6 on
10YR 6/2
[illegible] spherules in the [illegible]

36.2 [illegible] VERY POORLY
[illegible] SPHERULES MAKE
[illegible] PRISMATIC
[illegible] UP TO [illegible]
[illegible]

Upper [illegible]
fissile slightly [illegible]
[illegible]

46

75
48.
51 very [illegible]

[illegible] 45 - 52
51 6/2

[illegible]

[illegible] 5 5/6
[illegible] 70 [illegible] 7/3
lee Cath bleds.

53 Sos.
54 TILL
64 Top of Hill End [illegible]

6568 Golden Valley section
[illegible] River Valley
SE 1/4, Sec 29, T 145 N, R 92 W.
Mountrail Co.

FORT UNION Fm
Exposed in bluff for abt.
30' below [illegible] of this
sect.
Typical [illegible] grey
shales [illegible]
Tu. fm [illegible] brown lig. shale & lig.
-215' 5Y6/1 fissile sh with 5YR3/4
0. plant matter on B.P.S. &
some times [illegible] shale
[illegible]
[illegible] 1" lignite [illegible]

1' wh. color 0 (-60) TO 12', is
5Y7/2
1' A. fg ISA, UN ind. SS with
interbeds of lignitic
sand & slst (1")
fr. col. 5Y6/1
215' INC number of 1/2"
5Y4/1, clay interbeds
no lim. st.

4" [illegible] CLAY [illegible]
THIN [illegible] be [illegible]

5" CLAY SHALE WITH TYP
SYSTO, [illegible]
[illegible] PLANT
REMAINS

6" [illegible] CLAY [illegible]

7" fissile [illegible]
SYSTO

8" [illegible] CLAY [illegible],
[illegible]
Color. [illegible]

9" massive, [illegible]
SYSTO, [illegible] PLANT
[illegible]

10" Golden [illegible] Fm.
[illegible]
GRADATIONAL CONT
[illegible] BASED NOT
[illegible] CHANGE

[illegible]

[illegible]

[illegible], MASSIVE

[illegible] 2/11 (N-4) CLAY [illegible]
[illegible] [illegible], some
[illegible]

Air color [illegible] 15
N-7

[illegible] gypsum
[illegible] CLAY
N-7
[illegible]

[illegible] 13.5 same [illegible]
[illegible] PLANTS

14.7 - MASSIVE WATER tough
Sh SILTY CLAY N-7
GYP
17. Same [illegible] 14.7 [illegible]
[illegible] GYP.

[illegible] 19.5

[illegible]

[illegible]

As below [illegible] though not
as rough [illegible]
[illegible]

[illegible]

Carb [illegible]
[illegible]

5 YR 2/1 [illegible] AT 22.7.
wh. [illegible] 21.7-22.7 N-3.
Middle [illegible]

[illegible] Th. [illegible]
[illegible]. A very [illegible]
lim. sphs. [illegible]
wh color 22.7 - 3X [illegible]
CLAY IS [illegible]
Kaolinite.

[illegible] A. [illegible] [illegible]
[illegible]
SS. UNIT HAS MANY SEAT
lim. sphs.

26 AT This level [illegible]
lim sph. Aggregations.

26.3 [illegible]
[illegible]
[illegible]
[illegible] 12.

30.3 Up. LAV.
EXTREMELY [illegible] CONTACT
with M.O.
UNIT MASSIVE, NT
SITST wh [illegible]
[illegible] 30.3 - 34.3

[illegible]

[illegible]

34.5 to [illegible]

[illegible]

Color 5Y7/1

35. [illegible]

[illegible] 4.5

35.3 Upper mbr.
5Y6/1, silty fissile
sh.
[illegible] 35.3 - top
5Y6/1

36. silty massive [illegible] mic.
sl. plas. 5Y4/1 sh
38.5 silty clayey, 36
mic. fissile [illegible]
Color 5Y7/3

39.4. massive clay of plast.
color 5Y4/1 with
nests of 5Y5/6 lim
17.9 sec. sp. conc.
[illegible]

40.8. v. fg., SA, 570 mic.,
laminated with
[illegible] v. unind.
c. 5Y5/2 with 5Y5/6
gypsum crystals.

41 42. – fg. ss. non lam
ss. within, [illegible] 40.8

45 1" Bedded 2" mic
limestone cemented
conc. [illegible] layer.
c. [illegible] 5/4

46.5. fissile plastic gypsiferous
clay c. 5Y5/2 with
10YR6/6 lim. st.

50. silty fissile 10YR6/6
clay

[illegible] chippy.

[illegible]

[illegible] covered but fg [illegible].
[illegible] atomic unwind
CLAYEY [illegible]
[illegible] slope [illegible]

wh [illegible] sup. 10YR [illegible]

62'
[illegible]
72'

[illegible]

10YR [illegible]

Bedd-y

61. [illegible]

A[illegible] [illegible]

[illegible] Contract

92'

[illegible]

Sec 39

A. [illegible] OF
N 8 KAOLINITIC SS

F.U. Fm

N 8 F.U.

✓ 7/71

6570 Camel's BUTTE S Dunn Co.

SE, SE, Sec 27, T141 N, R96W

S. Dunn Co.

[illegible] TARTS IN

Golden Valley Fm. 2.5

~~Golden V. Fm.~~

~~2 Mer. 2.5~~

0' Fort Union Fm

Lignite

[illegible] Covered.

0.8. Golden Valley Fm. L.m. L.gr

170 mic Clayey fissle NG.5

SITST. L.m. ST. 10YR 7/6 ccc

2.3' UNIT NOW A Vfg, SA, 170 mic

Clayey, fissle, SS

Color Same As 0.8.

5' UNIT now L fissle SITST

370 mic color N7.

wh. Color 0-6 - N7.

6.3 Middle Crazy

5Y5/1 Chippy SILTY 22 mic.

CLAY Gypsiferous.

much. 10YR 5/4

✓

[illegible] Color 6 – 12.
10YR 5/2 mottled with
10YR 7/6
Min. Lim. Sphs. from
[illegible].
Gypsum [illegible] limonite
[illegible] Jo [illegible]

7.5 10YR 6/2 massive
silty with limon[illegible]
+ Gyp. joint [illegible]
+ [illegible] sphs.
Some [illegible] mxs.

9.5. 5" bed [illegible]
[illegible]
[illegible]
9.8. V/g very kaolinitic
to mic 10YR 8 5/2
ss.
11 Unit now a [illegible]
[illegible]
[illegible] Thin

14 [illegible] color now
10YR 5/6 [illegible] gypsum

✓

[illegible], Sl. SILTY CLAY [illegible] phs.
[illegible] do if

16.8. Very clayey [illegible]
SILTST [illegible] HOLE.

18.2 Upper [illegible]
CLAYEY SILTST 10YR6.5/2
[illegible] LIGHT
[illegible]

[illegible] 11-21.5
[illegible] 7/1

[illegible] Incl. CARBONACEOUS
[illegible] CLAYEY.
Chippy. [illegible] 7/1 SILTST
Some 5YR5/3 LIMONITE
ST [illegible] IN FRACS.

21. Highly LIGNITIC, 5YR5/2
SILTY PAPER shs. [illegible]
Poor pl. [illegible]

poorly Upp Mb.

21.5. [illegible], Sl. fissle
CLAY WITH ABUNDANT
MONOCOT TRAYS

√

(museum) [illegible]

[illegible]

Wh. [illegible]

[illegible]

[illegible]

Big case [illegible] 6570 a from 22'

23.5 Single [illegible] 15.

[illegible]

[illegible]

imp. Some [illegible]

[illegible]

[illegible] 2' high

[illegible]

monument [illegible].

25 [illegible]

26 [illegible]

V

[illegible] upward
into a [illegible] silt
with [illegible] ~~mass~~
[illegible] of gyp xls
5Y 5/1

[illegible]
[illegible] xl.
[illegible]

30 silty [illegible] lay
[illegible]
31.4. fissile silt 5Y 6/3

32.4 [illegible]
very lignitic clay
fr [illegible] 5YR 4/1 to [illegible]

32.7 lignite 5YR 2/2
32.7 very fissile, paper sh.
[illegible] very poor pl.
frags (color 10YR 4/2.

33.4. clay [illegible] fissile
[illegible] pl. frags 5Y 5/1

34. 5YR 2/2 lignite with gyp.
jarosite.

6570 C from 36'

↓ . ISOETITES. ✓

5Y6/1 " BEDDED
fix with SALVINIA
270 SALV. SAMP
[illegible] upward in 1/2'
to [illegible]

[illegible] pl. [illegible] incl. [illegible]

36.5. bedded fisute,
clayey, 270 mic. sitse.
5Y5/3

37. steep cliff of vfg. [illegible]
[illegible], unind., 270 mic.
5Y7/2 SS.
AT BASE 37' IS A
2" layer of fisile
limonite [illegible] is [illegible]
with gyp. [illegible]

[illegible] SI plastic, unfissle, but
[illegible] fract, [illegible]
Lignitic, Limonite
ST, poor pl. remain
bearing, 5Y3/2 CLAY.

41.7 A vfg, silty & clayey somewhat
friable, 30 mic., 5Y5/2
[illegible] with occ xls. &
[illegible] 1" limonite st.
Zone at base

42.[illegible] Unit now a
5Y5/2 silt with
pods & pockets of
vfg, 40 mic, 5Y7/3 ss.

43.5 Entirely vfg, SA, 30 mic
5Y7/2 ss.

47.2 Band grades into silty
massive 10 mic
5Y5/2 siltst.

49.3 Thin 1/2 in lignite

49.4 vfg, SA, sl. clayey [illegible]
[illegible] mic, 5Y6/6 ss.

52.4 Silty, massive, sl. plastic
5Y5/1 mic. clay.

53.3 An HS layer.
A silicified silt or
peat tannish brown

Color varies so much
that not use. [illegible]
[illegible] old [illegible]
[illegible] rusty [illegible]
[illegible]
[illegible]
[illegible]
→ Sample 6570 d
944.2 A [illegible]
[illegible] 1918 6/5 [illegible]
[illegible] 631
[illegible]
[illegible]
5/8/1
Ledges [illegible] x [illegible]
MICA [illegible] 2 lb [illegible]
[illegible] P
5/6/4
[illegible] B 1
[illegible]

75'
77'
81'
87'
87'
90
93
96'
99'
102'
105' Top of [illegible] section

17'

HS LAYERS fairly common
IN THIS UNIT
HAT 70' 73'
75'

261	×1	1. 6[illegible]°	7°5	
260	260	2. 2[illegible]	5	
159	159	3. 145°	N	
162	162	4. [illegible]	[illegible]	
1		5. 187°	[illegible]	
151		6. 317°	[illegible]	

131

vectors 190 for 2
65° for 3

151

155°
90
65

1.5°
260
-40
170 red.

very Large

ON S. side of Butte

Channel lower cut of
[illegible] WITH
[illegible] channel
of [illegible] MOSITY
[illegible]
[illegible] 2 feet They
are unsorted or
oriented with ASS
[illegible]. Some HAVE
[illegible] edges
[illegible] LEFT when
[illegible] some
[illegible] AS [illegible]

[illegible] with ~~slump~~ [illegible]

1 bedding NEATLY
TRUNCATED by lower
[illegible] of ~~the~~ breccia
[illegible] SUIT does not
appear to be [illegible] of
slumping.

251	161	Verto
262	172	
274	184	
253	163	

Ans.

77
180
257
14
271

251

7) 1152

~~[illegible] 12 leading [illegible]~~

Corr. dir	Current vector	
251 S	61	168° av of 6
262 S	72	
274 S	84	
239 S	49	
260 S	70	
261 S	71	
159 N	69	67.3 av of 3
162 N	72	
151 N	61	

July 27

NE 6571 NE, NW, Sec 4, T 140 N, R 97 W.
[illegible] Co

35' dry well ind. [illegible]
[illegible] of [illegible] mile.
G.U. SS, As AT Camels
BUTTE.
Carries A Conglomerate
As AT 6570 C

X bedding dips [illegible]
N. & [illegible]

[illegible] ft. below Top
[illegible]
very large [illegible] 6"-1'
INTERMIXED WITH SMALLER
FADES OUT LATERALLY
upward [illegible]
become mostly smaller
[illegible]
1 foot [illegible]
INTERMIXED WITH 1/2 [illegible]

Probes [illegible] or
[illegible] from [illegible]
[illegible]

[illegible]

[illegible]

Amp. 6571 b.

Sample of a [illegible]
[illegible] mica [illegible].
[illegible]

✓

LOC 6572 NE, Sec 32, T 140N, R 97W
in Hinds Co.

BUTTE, capped by [illegible]
upper Mbr. SS. AS AT
LOC 6570 + 6571

[illegible] BUTTE
CENTER [illegible] T140N
R 97W
[illegible]
[illegible] STAR ITR TO
THE [illegible]
[illegible] Cowgill [illegible]

July 29.

CC 574 N. DAVIS BUTTE.

North Davis Butte, Center Sec. 24, T 140 N, R 96 W, W. Starks Co.

Section Through U. M. Gr. 9 2, White River Dist. poorly Exposed Sect

Gulch Valley Valley
Fm. ~~to~~ U. M

0. F. SA SIL/2, 1/2 mic. Clayey, poorly ind SS.
Small areas of lim st.

1. MA SIL 1/2 [illegible] of [illegible] Lim, Chippy [illegible] Jarosite.

3'

4. [illegible] Color ~~[illegible]~~ SA m. ASI

6' 10YR 6/3 [illegible] Chippy SITST. [illegible] Jarosite pods.

7 LIGNITE

10.2 fossil, SYL, 2, [illegible]
[illegible] shales
[illegible] 21
SYLL
upward [illegible] more
blocky & less [illegible]
w/ pods [illegible]

[illegible]
Dicot [illegible] poor
Glyptostrobus.

11 Same unit as 10.2
but [illegible]
[illegible] closed [illegible]
[illegible]

[illegible]
[illegible] SYLL TO NH
[illegible]

[illegible] INTO A
[illegible]

26 [illegible]

[illegible] CLAY.

26.5 [illegible]

5YR 5/3.

28.3 Clayey [illegible], [illegible] mic

10YR 6/5 vfg, [illegible] ss.

[illegible] 5YR 5/1 & 2.5Y 6/2 [illegible] ST.

massive;

[illegible]

37' ~~massive~~ Crappy [illegible]

[illegible] clay with

[illegible] pebbles

[illegible]

Wh. color 37-45

5Y 7/2

43.3 vfg, sr. ss, 10YR 7/5

[illegible] Covered [illegible]

[illegible]

60

56.9 [illegible]

[illegible]

60.5 [illegible]

[illegible] N-6 [illegible]

6 [illegible]

[illegible]

63.5 Massive [illegible] 5Y 6/4

[illegible]

[illegible] ~~Clayey [illegible]~~

~~Mica 10YR 6/5~~

[illegible] Massive [illegible] 5YR 6/1
5 N 5 [illegible]

65.1 5Y6/2 [illegible] massive
[illegible]

66 [illegible]
[illegible], [illegible], 5Y 5/6
SS.

67 DO
69.4 vfg, SA, lignitic
SS layer 5Y 5/4 to
5Y 3/2 ≈ 70 mic.

69.8 fissile mic. 5Y6/3 Sh
70.9 Sh. now a MASS.
SLTST.

71. vfg, SA, 70 mic. clayey
[illegible] 5Y6/6 bedded
[illegible]

73 massive irreg fragments
SLTST 5GY6/1 UNTYP
for GIV. more like
N.B. Samp. 657A(b)
upward AT 75 becomes

darker color. 3/8 5/1
where [illegible]

[illegible] MASSIVE [illegible]
SITES. [illegible] 5 1/6/3

78 Continued

same. [illegible] NR. 55 CAP.
55 WITH CHERT
[illegible] PEBBLES.

86. Fg. unid. (SCRATCHED
[illegible]) 34. 17. MIL.
INGT/H

[illegible] 1.0 - 9.5
[illegible]/2

95 White River SS
[illegible] to Gv, is
obscure but believe
[illegible]
fg. SA to med. 1-3 Domic
Sil. cem SS
Clay balls in lower
2' Greenish olive
Color of SS N8- 5YR 8/1
to 5Y 8/1
Clay gall color 10YR 6/2

Areas of Authigenic
Cho. [illegible] bleb.
Lower portions filled
with gall.

Lifica Cemo. [illegible]
Clay gall Samp. 65711 E

[illegible] mod to [illegible]
[illegible] 3 Domic with large
flakes [illegible]
somewhat bedded
well ind. SS
[illegible]

[illegible]

6575 July 30

NE Sec 3 T 148N, R 95W
N. Dunn Co

Short Giv. Section

Lower Grey Thick Ash
Ora
Lav 5' Bentonitic

May be a contact if
enough searching are
60' of Lav mbr.

6576 NW Sec 5 T148N, R94W
N. Dunn Co.

Large Strata sided
Ds Site of Fu. & Gv
Contact Fu Gv is
very gradational
Grey grading to
brown [illegible] Lay below

mo - 15'
V. Lav. very pronounced

6577 [illegible] BUTTES
Sec. 1-2 11-12
T 149N, R 94 W.

F.V. [illegible] 3 [illegible]
[illegible] A typical
S, B section to top

6578 NW, NW Sec 33 T 151 N R 94 W

Good G.V. section in a
[illegible] Bluff
Best section in Sec 5
T 150 N R 94 W

Blue Buttes Capped
by [illegible] L.S.
Overlying lim. G.V.
in places 6577-78

Upper mbr [illegible]

July 31 Hy 22 on N B.Co. Inn

Sec. 6575

Golden Valley Em
L.M. [illegible] Lower
Cont [illegible] Although
[illegible] [illegible] 6'
[illegible]
6576

0. Ufa, sa, unid, [illegible]
clayey 5YR6/1 with
5YR 5/1 lim. ST
wh color [illegible] 1

2 [illegible]
[illegible], 5YR6/1 with
[illegible] lim ST.
Peds of Carb trash.
[illegible] color [illegible] 4, 2 5YR 3/1

[illegible] massive [illegible] with
carb trash & charcoal
frags. Some small
lime [illegible]
fr. Col. 5YR 7/1

Stamps
6575

LEAVES Above 6.2

16.

Color

20 MASSIVE

21

22.5 CLAYEY SILT

Wh. Color

5YR 6/2 AT 24'

GRAD 10YR 4/2 AT 30.2

245

27. VERY

CLAY

[illegible]

[illegible] Upper [illegible]

[illegible] 15.)

Very [illegible], [illegible]
poor [illegible] [illegible] 15
[illegible] 10YR 6/2
[illegible]

Wh. [illegible] 5Y 7/1
[illegible] - [illegible]
[illegible]

33 [illegible] 5Y 5/1

[illegible] [illegible] [illegible]
[illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] 5Y 5/2

36 [illegible] [illegible] clayey
[illegible], [illegible]
some [illegible] carb. [illegible]
[illegible] pl. [illegible]
[illegible] N3 with
same 10YR 6/2

300

[illegible]

Gyp [illegible]
[illegible]
[illegible] 5Y [illegible]

Wh color [illegible]
[illegible]
[illegible]
[illegible]

37 [illegible]

[illegible] 6 [illegible] with [illegible]
Gypsum [illegible] 3/3

[illegible] [illegible]
[illegible] unmixed
[illegible] /2 [illegible] with
[illegible]

41. [illegible] SA, [illegible] lamina
Gypsum [illegible] SS.
5Y [illegible] /2 — unmixed

Wh. 42 - top. 5Y7/3

5" Core of Limonite cem SS.
with Lignite & typ
1/2 in [illegible]
2 in. [illegible]

4H' Same as 4d' but lim. now
more [illegible] Lim is 5Y5/5

50,3 Lim. cem spk cores.
Thin unit is
[illegible] SA, non clayey
[illegible] SS with [illegible]
[illegible] on bps
& also some [illegible]
on bps.
Somewhat clay, but
unlike above although
4T [illegible] [illegible]
[illegible] well [illegible]
dr. [illegible] 5Y7/2

5H same as 50,3

5J1 Less limonite than
same as 50,3
color N 7/5

315

56. [illegible] SA SS
[illegible]
Color [illegible]
with light [illegible]
laminae.

60.3 [illegible] LAMINATED
[illegible]

[illegible]
[illegible]
[illegible]

[illegible] is [illegible]
[illegible]
[illegible]

[illegible] AIR [illegible]
[illegible] according [illegible]
MATERIAL [illegible] WATER is.
[illegible] fossils Color
[illegible] 5YR 3/2

[illegible] Color of [illegible]
5YR 3/4

70 [illegible]

[illegible] CLAY, bedded
5Y5/2, [illegible]
DEAN[illegible]

[illegible] massive [illegible]
[illegible] same
[illegible]

[illegible]

77. vfg, [illegible]
[illegible] mic. [illegible]
5Y4/2

[illegible] vfg, SA, massive,
[illegible] clayey,
5Y5/2 to 5Y6/3
[illegible] mic SS

[illegible] with same as 78.5
but out [illegible]
well ind. ledges
ledges DES.

SECTION ~~6580~~ 6579 6680 AUGUST 3, 1965

NE,NE Sec 5, T 150N R 94W
S. McKenzie Co.

SECTION STARTS IN the F.U.

---

0. FORT UNION FM
S.B. LITH.
A. 5Y6/1 fg SA, bedded
LENTICULAR UNIND SS.
WITH LIMONITIC & lighter
grey wh. LAYERS.
LAYERS of SEAT limonite
manganese "ALLIGATOR" Bones
OCC near 0' 4' 8' 10'
18' etc.
Petrified TRUNK sect.
(NOT app. upright AT 7'.

Wh. Colon. MOSTLY 5Y7/1
WITH Thin band of
5Y 8.5/1 betw. 2.84 & 2'
& some [illegible] 10YR 6/4
lim. ST bands.
Some portions improf
WITH bin unIte.

Gypsum xls are prev
becomes silter toward
top

18.1 massive, 5Y 5/1, 5Y 6.5/2
wh, gypsum
bearing, pl. wood
silts. carb
[illegible]

21. silty clay with gyp
xls. col 5Y 3/1 with
N 3 pet wood.

23. [illegible] deeply [illegible]
top [illegible] crust
very carbonaceous clay
[illegible] pods & [illegible]
[illegible] trash
gypsum [illegible]
[illegible]
[illegible] 3Y 7/1
[illegible] pet-lig [illegible]

29.3 Lignite. [illegible] sh.

[illegible] 5Y 7, [illegible] bearing
[illegible] 5YR 5/1 [illegible] xls

32, 3. Less [illegible] rath.
MASSIVE SH. with
few pl. remains

33.4. Base of Golden VALLEY FM.
Lower Mbr.
[illegible] SILTY
X laminated SILTST
with [illegible] portions
5YR 4/1 [illegible] port
5Y 7/3 & some
lim. ST. 10YR 6/6
MANY fossil leaves present
of Typ. Paleocene
INNUNDATION flora.
METASEQ. UIUA U.C.
→ SAMP 6580 DICOTS. { METASEQ. U.C. Cercido
Glypto STROBUS oTh. Dic
MIC. TAXODIUM

~~SH~~ 34.6 UNIT GRADES UPW.
INT A vfg. to MIC.
X laminated 5Y 7/2
SS with occ CLAY
interbeds, lim
C+M. SILTST ACCS
A layer of
CHARCOAL WT > 4.9

Wh. color. 33-4-3 5Y7/1

35. Vfg, SA, kaolinitic, micaceous, bedded, 5Y 7/2 SS. with some 10YR 7/6 fim. ST. some gypsum [illegible].

36. UNIT semi ind [illegible] A steep slope Vfg, SA, kaolinitic, micaceous, [illegible] some small sph. lim. com. SS. Pores 1/2" to 3".

wh color. 35-4/3 N-8.

[illegible]

42 [illegible] very kaolinitic SS. Color. N 7.5.

43.7 Vfg SS AT base grading
Upw. into a SITST. both
11ths with abundant
lignitic mat., charcoal
frags, & gypsum xls.
some lignite lenses.
Gr. color. 5YR 5/3 -
trans to mid.

← 44 massive, slightly plast.
SUB44, clay.

" " 42-45 - 3Y 7/1
Wh color 45-60.2 N9 7 10YR8/6
middle orange.

45 45. Same unit as 44
But with appreciable
5Y 7/3 limonite. Etc.

46.5 5Y 6/3 with some N3 spots.
, massive clay
with siderite spherules.

47. massive clayey, dom. 10YR 8/2 with 10YR 7/6
lim. spin cont. SITST.

49.2 clayey SITST hard
cont high conc. +

6580

SCATTERED lim spns
SILTSTONE [illegible]
with 10YR 7/6 [illegible]

50 MASSIVE [illegible] lim [illegible]
[illegible] 10YR 8/2, SILTST
with lim ST. 10YR 7/6
~~Abundant~~ Common SEAT
lim Sphs. & [illegible] Sp
joint fillings.

54 Lim Sphs [illegible]
Abundant other [illegible]

[illegible] Mod [illegible] STAINING
[illegible]
[illegible]
w. 2.XV.

60.2 Upper LAV
MASSIVE, [illegible]
very silty, 2YR 7/1
c lay.

Wh Color 60.2 - 60.7
2YR 7.5/1

66 ~~vfg~~ SILTY clay 5YR5/1
MASSIVE.
67.3' same with as 66
color. 5YR 3/1

67.5 Upper Mbr. (This forms
BUTTE cropping ss
of blue shales and
[illegible] and [illegible]

5Y5/3 [illegible] SILTY SILTST
fading blue and [illegible]

67.8 Vfg, x laminated
semi ind. SA, BIOMIC
limonite [illegible]
[illegible] 5Y7/1 with 5Y5/3
lim. ST.
Zone of greyish [illegible]
discordal [illegible] conc
AT 66.' 71.5' & 72'

72' Concs. Then
SANDY bedded SILTST,
Col. 5Y7/1

[illegible] color 67.5 - [illegible]
5Y 7/2
[illegible] Lam. [illegible]
silt w. [illegible]
[illegible]
[illegible]
[illegible] pl. [illegible]
color [illegible]
light band [illegible]
[illegible] 5YR [illegible]
[illegible]

[illegible] massive, well [illegible]
cl f [illegible]
170 mic [illegible] vf [illegible] sh.
[illegible] ss.
fr [illegible]
sec thin [illegible]
[illegible] color [illegible]
5Y 7/4
78.3 thin bed [illegible]
[illegible]
oth w. [illegible] same
370 mic.

(1) [illegible] vfg [illegible]
[illegible]
[illegible]
con [illegible] shell

[illegible] SS [illegible] UNIT
OTHW SAME AS [illegible]

[illegible] LARGE [illegible] FLOATING
[illegible] MANY CONES
[illegible] CHARED BY [illegible]
[illegible] FR. WATER [illegible]
[illegible] 5Y3/4 & MOSTLY
N 3. MIC.

[illegible] [illegible]
[illegible]
Bedded 5Y7/1 SHALE
WITH THIN TUBULAR
[illegible] CONC.

WH COLOR 84.2 - 86.5
5Y7/1

[illegible] 470 MIC
5Y7/1 SS.

86.5 [illegible] 1.7h 1586 WELL BEDDED
[illegible] MIC SS
[illegible] CALCAREOUS
[illegible] PARTS.
COLOR 5Y6/1

wh. color 10 YR 5YR/3

10. [illegible]

[illegible] ABS

[illegible] color 5YR 6/2

[illegible]

End of this part of sect.

Leveled to new section from top of Fe mang's.

SECTION 6581
Above The lower
Mbr.
SECTION IS AUXILIARY
TO 6580
LOC

SECT START AT 84.2 of 6580

93.5 LARGE [illegible] Fe MANG
CONCS.
94.5 BEDDED CLAYEY SILTST
5Y 5/1

wh color 83.5-100
5GY7/1

91- CLAYEY MASSIVE SILTST
5Y5/2

92.5 SAME AS 89.

96 SS AS AT 90 of 6580
but poorly lith

110'
115
120'
125'
130'
135'
140'
155'
160'
165'

[illegible]
[illegible]
[illegible]
[illegible] off forming
bottle [illegible] 55.
[illegible] mice
[illegible] some
[illegible]
[illegible] units [illegible]
[illegible]

[illegible] SS [illegible]

[illegible]

[illegible]

[illegible] color 162 - top
5Y 6/3

170'
175'
180'
185'
190'
195'
200'
205'
210 Top of SS 9
section

Aug 4, 1965

6582 SE, SE, Sec 17, T142 N, R93 W
S. Dunn Co.

~~THE S.V.~~
The WESTERN MOST
SV SECTION IN THE
FAIRY DELLS ESCARP.

SECTION STARTS ON
UNLIGHTED SV,
PROCEEDS THROUGH A
TRANSITION ZONE
UNIT CONT ALAMO BLUFF
1000 MO. DROPPING
FORT UNION FM.
S.B. OVER.
TYPICAL S.B
SANDS
70' BELOW

-3 GOOD LIGNITE
WITH JAROSITE
5YR 6/2

-3 TO 4.5 - 5YR 6/2

4 0 [illegible] into
a fissile [illegible],
[illegible]
[illegible] 5YR 7/1

wh. [illegible] 10.5
5Y 7/2

[illegible] UNIT grades upw. into
A MASSIVE SILTY
[illegible] 5Y 5/2
CLAY
[illegible]

6' SILTST [illegible] same as
AT 5

7' vfg sandy [illegible]
mic, [illegible]
fr. [illegible] 5Y 5/4

8' vfg [illegible]
do' 5Y

10' MASSIVE, vfg, SA, SS
fr. [illegible] 5Y 6/2
[illegible] 100K of

very low amt. of
Kaolin.

15.5 Bedded fissel [illegible]
somewhat sandy
silt [illegible] 5Y5/1

Wh. color [illegible] 4
3Y7/1

17.5. Yel. [illegible]
[illegible] 15.5.
Gypsum xls.

20. [illegible]
beds [illegible]
17.5

20 ft. [illegible] 17.5

[illegible]

23 [illegible] desc. [illegible]
Vfg, SA, Wrd, massive
SS. [illegible] N7
with 10YR 8/5 [illegible] mon.
streaks.

24 Golden Valley Fm.
L.M. L. Grey.
Base somewhat [illegible].
But L.Th. here is that
of S.U. [illegible]
common S.B. of FV.

[illegible] Clayey [illegible]
[illegible] with limonit-
intercalations [illegible]
rosettes.
Some poor pl. stem
remains preserved

26 Unit now a beautiful
[illegible] with leaf
remains. N7 with
10YR 4/2 carb trash.

V

AT 27' FLORA RICH
WITH CARB TRACK
Ceratophyllum fruit.
C. leaves. AT BASE OF
[illegible]
[illegible] AT TOP
Mosses & Equisetum
C. arctica

Wh. color 24-27.2 N7

27.3 Vfg, sandy, SA [illegible]
Grained, massive, N7
with 10YR 7/6 iron stains
SS.

Wh Color 27.2-33
N7.5 AT BASE N6 AT [illegible]

27.4 [illegible]
CLAY [illegible]
[illegible]
1/4" [illegible]
ASC
[illegible]
[illegible] 27.5
[illegible]

31. MASSIVE SILTST
do 30'

Wh. color 33.2 - 36 - N9
middle orange ~~[illegible]~~
33.2 A bed 1/2 to 1 [illegible] N9 SILTST
[illegible] of Lim. St.

35' do' 33.2 Lim. & gyp
joint fillings begin to [illegible]

36.' same as 35' more Lim. St.

[illegible] 36 - 38 mostly ~~10YR~~
10YR 7/4 with
10YR 8/2

38.5 MASSIVE CLAY
sl. sliv. 10YR 7/6 &
10YR 8/2

39.5 MASSIVE [illegible]
[illegible] SILTST. col - [illegible]

42 [illegible]

fr. [illegible] [illegible] 39.5

wh. col. 43-[illegible]
[illegible] 1.5/4

45' Dr. 42 [illegible]
47 " " [illegible]

48' Up. [illegible]
massive, [illegible]
[illegible]
fresh [illegible]
[illegible]

[illegible] col. 49-50.7
[illegible] to 5/2/1

49.6 Hard [illegible] [illegible] cem
[illegible]
[illegible]

49.8 [illegible] 5YR 2/1

50.2 Upper member
[illegible] called, irreg
fissile, [illegible] MAIN
[illegible] 10YR6/2
sh. [illegible]

[illegible] color. [illegible]
5YR7/1

52' LAYER of Fe MANG
conc discoid. 3-4"
AT 52' [illegible]
wh. AT 52- 10YR4/3 not
in below

53.1 unit below gradat
[illegible]
[illegible] 5Y6.5/1 SILTST.

53.2 LAYER of CONC SILT
LIM [illegible] CONC [illegible]
base of fine SILTST.

wh. color. [illegible] - 63
5Y 7/3

Grades upward within
1" to [illegible]
[illegible]
1 - TASK [illegible]
[illegible]

← 56.3. [illegible]

56.

56.8 Vfg silty [illegible] with
pl. from [illegible]
SX 6/3

[illegible]
[illegible] 12 [illegible]
[illegible]

56.2 [illegible] paper [illegible]
[illegible] inserted
[illegible] with lith [illegible]

[illegible] paper of gypsum
[illegible]

59. Lignite [illegible] &
[illegible] lb. [illegible] 1/2

59,7 [illegible]
[illegible] increased in [illegible]
Limon [illegible] [illegible]

60. Extremely disturbed
[illegible] of [illegible]
Coal [illegible]

Blocks of [illegible] to
1 ft in AX now
unconsol. [illegible]
ss.

One [illegible] cyl.
[illegible] 8" dia 3' long
[illegible]
belongs to unit above

62 Irregular base to this
unit with
[illegible] & pillows & pillars
[illegible]

Unconsolidated
that at 917
occ. at 61 above
This is just a pad
however
Compiss. med g. Atomic.

1.	195°	Dip [illegible] E
2.	34[illegible]°	E
3.	3[illegible]°	E
4.	350°	E
5.	323°	17½° E
6.	324°	E
7.	[illegible]0°	E
8.	[illegible]6°	N
9.	[illegible]°	E
10.	[illegible]	19° N
11.	118°	N
12.	[illegible]0°	N
13.	183°	E
14.	[illegible]5°	E
15.	160°	22° E
16.	162°	E
17.	[illegible]3°	N
18.	166°	E.
19.	161°	E
20.	166°	E 33.5°

August 3, 1965.

6583 Center Sec 27 T 136 N, R 94 W

Non [illegible] bedded well
nd, Butte Capping [illegible]
F. U.

6584 NW, NW, Sec 31, T 136 N, R 94 W
2, M. GV Sect. Capped by
SL And close to road.
[illegible]

[illegible] Butte [illegible]
SW, SW, Sec 12, T 135 N, R 97 W.
Heth.
[illegible]

Sect, with 10' [illegible]
25' M.O. split by 8'
of [illegible] LAY
2' Upper LAV with
A Ly Sh. AT pos
of A.B Ly. bearing
abundant LAV &
Dacite.

chips

obsidian ???

well wd. & bedded ss.

ish & ell sysm

6586 STONY

31, T13bN

R 94

X bedded

[illegible] DRUM
[illegible] WIR
[illegible] WISH
[illegible]
[illegible] FAIRS APT 2/3 UP
slope of BLACK BUTTE TO
The SOUTH
[illegible] DESCRIBES THAT [illegible]
[illegible] LOUIS BUTTE
This is [illegible] IN [illegible] & HAS
much [illegible] MAT. IN IT.

✓

N W W [illegible] T 20N R 94W

[illegible] at
[illegible] low [illegible]

[illegible] (?? [illegible]) [illegible]
[illegible] the is
[illegible] is [illegible]
[illegible] base

6588

6589. SE, Sec 6, T 130N, R 94W, Hettinger Co.
DEFINITE K V, FAIR, BUT
SHORT SECT.

SECTION 6585 SW, SW, Sec 12
T 10 N, R 95W.
S side of Bl. BUTTE.

3Y 4/1

middle

3Y 6/1

3 [illegible] unind, vfg,
[illegible] 70
[illegible] 3Y 7/3 with
[illegible] 5YR 7/4 Lim.

6.5 X

with [illegible]

[illegible]

[illegible]

[illegible]

5.6 [illegible] MASSIVE

[illegible] with

[illegible] SCAT

Color, [illegible]

6.2 massive [illegible]

[illegible] to

SCAT [illegible]

X/s. [illegible] color

10 YR [illegible]

.585

8' [illegible]

N7 MAY WITH
10YR6/4 LIM ST

wh. color Y- 10.5
[illegible]

9' N9 SL. S. [illegible]

SMALL [illegible]
[illegible] pps.
KAOLINITE
[illegible] 1585 (W)

10.2 Inc [illegible]
[illegible]

12. [illegible]

6585

C. N 7.5.

[illegible] 5YR 8/1

13. [illegible] 5YR 5/1

[illegible] burrows? or

CLAY filled [illegible]

Carb. [illegible], massive

SILTY SH [illegible]

WITH A curious burrow

mottling [illegible]

Wh. color [illegible] 5YR 5/1

16.6 MASSIVE burrow mottled

SILTY [illegible] lam. [illegible]

[illegible] SPHERULITES

AS well AS [illegible] lamy

Lim. [illegible] SILTS [illegible]

Carb. [illegible] with [illegible]

Lim. ST.

Wh [illegible] 19. 10YR 8.5/2

19. SL. SILTY [illegible]

[illegible] CLAY

[illegible] A [illegible] burrows

C [illegible] SILT [illegible]

SPHS. [illegible] NS

[illegible] Carb. 19- [illegible] 10YR 6/4

5 1/2 x 13.

6585.

Upper mbr.

[illegible]

[illegible]

No more clay interbeds

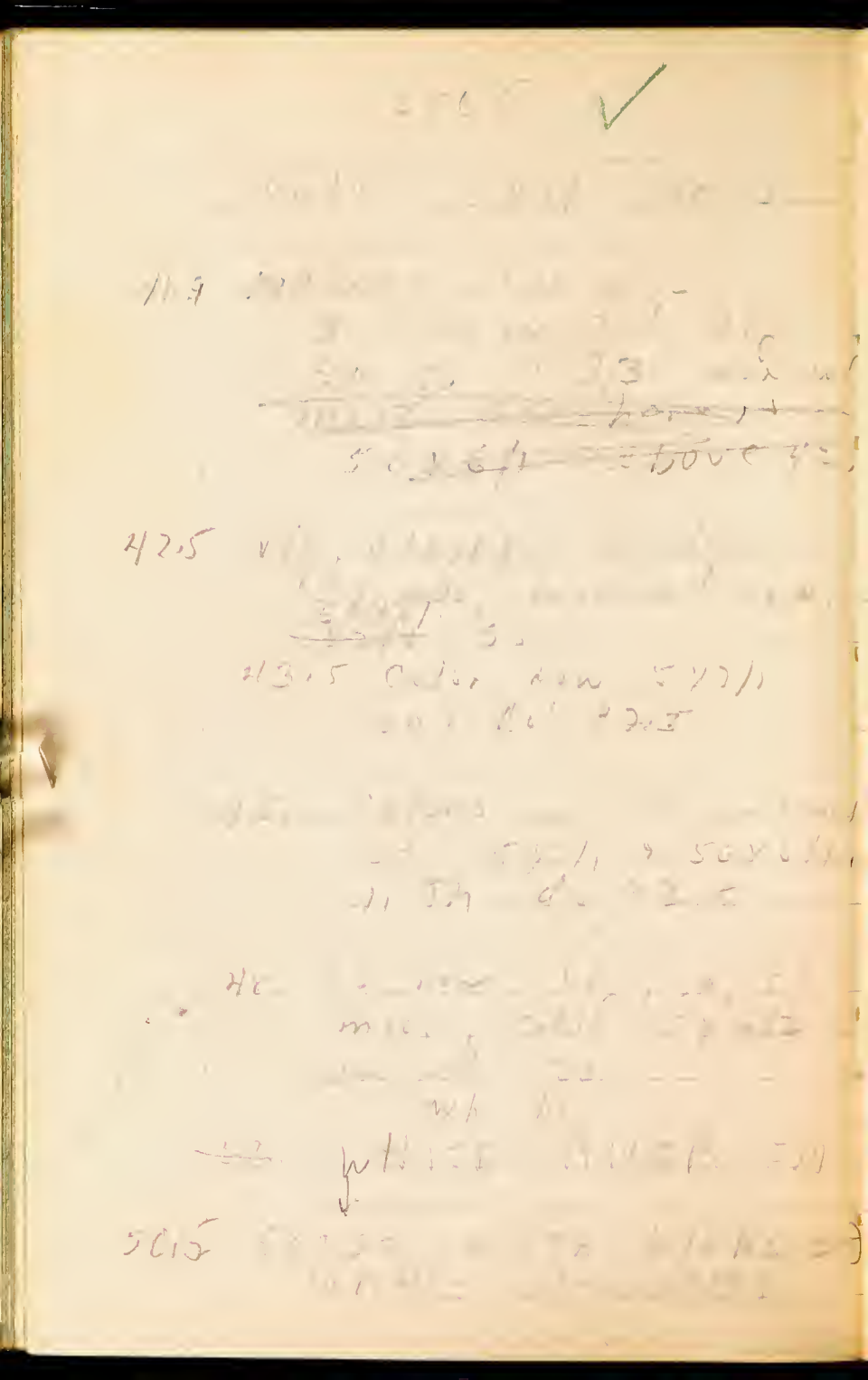
[illegible]

Uniq, SA, Dolomic

5Y7/2 SS-

Color 10YR 6/4

[illegible]



[illegible]

23. MJC. [illegible] UNIT [illegible] IS-

~~This is [illegible] S.V.~~

~~The [illegible] WR. CONT Reworked S.V.~~

This is WB BUT with large To [illegible] Reversed S.V.

UNIT CONT. 270 MHA [illegible] INTO Angular [illegible] TYP. of [illegible] H.

[illegible]

52 Vfy, A, NON IN. PURE [illegible]

[illegible] with some [illegible]

53, 5. [illegible] Angu. [illegible] GTZVTE, IS. [illegible] Col. SV 6/4

125'
125'
130'
135'
140'
145'
150'
155'
160'
165'

161' [illegible]

[illegible] Col. [illegible]

COARSE STAL [illegible]
WITH 60C [illegible]
[illegible] KNOLES [illegible]

[illegible]

ST. H

[illegible]

193 [illegible]

LAST [illegible]
BLA [illegible]
[illegible]

[illegible]
[illegible]

200. 60C [illegible]
MED [illegible]

204 End of [illegible]

Sec 6 S 87 [illegible]

[illegible]

0 [illegible]

mbr. [illegible]

Clay 5BR 6/2 (beautiful)

wh. color. CBP 7/2.

[illegible]

[illegible] N 8.5

1.3 SILTY MASSIVE 5BR 6/2

CLAY

wh 1.3 - 4. 5BR 6/2 mottled

WITH 10YR 8.5/6

[illegible] 1.3 colun.

10YR 7/4

3.4 Sl. SILTY MASSIVE SAND

5BR 7/2 [illegible] 16587 a

4 2" BAND of 10YR 6/4 CLAY

WITH A few [illegible] SCAN

SCRAPS 16587.

wh [illegible]

4.2 - [illegible]
[illegible]
very small. & ~~bands~~
of [illegible]

6' SITST [illegible] with
[illegible] ATITE
[illegible]
10 YR 7/6' Add some
[illegible]

wh. color 6 - 10p.
[illegible]

4.5 [illegible] wh.
[illegible] NON
[illegible]
[illegible]
[illegible]
N 9 - [illegible]/2

10.5 Clayey silt 5Y 5/4
with much 5YR 6/2
13.5 5Y 7/2 silt

[illegible] clay [illegible]
5YR 2/1 [illegible] NP.
18 [illegible]

18' covered or slumped
above this.

25'
30'
35'
40'
45'
50'

54 [illegible] 10YR 2.5/2 [illegible]
as with [illegible] tubular
holes in it. This thickens
further east and [illegible]
[illegible]
[illegible] 10YR [illegible]
[illegible] color, [illegible]

56.5 Top end of [illegible]

SE, Sec 8, T 136 N, R 94 W, Hettinger Co.

LIMONITE CRUST.

[illegible]

[illegible]

These [illegible]

[illegible]

[illegible]

Wh. [illegible] 6-7'

10 YR 8/2 MARLY WITH

[illegible] YR 8/6

wh color [illegible]
of [illegible] surface
as in valley

5. ~~Kg~~ 5.5 — [illegible]
This unit might
correlate with
pink [illegible] unit
near [illegible] at
658.

6.4 [illegible] 5R 6/2
with 5Y 7/3 with
370 mica [illegible]
[illegible]

6.8 [illegible] clayey [illegible]
[illegible] with [illegible]
[illegible]
The upper mbr [illegible]
~~color~~ Fr
wh color [illegible]

10 ~~Ver~~ [illegible]
silt fr col 5R 6.5/2
& 5Y 7/2
wh. color 5R 8/2 10-16
12 [illegible] unit color
now 5YR 6/1

15.1 mottled 5Y 7/1 & 5YR 5/1
[illegible] with [illegible]

6591 NE 1/4, NW, Sec 1, T 46 R 96 W
n. Dunn Co.

6591 cal Coprolites Bones
from m.o.

G.V. outcrop

Poor outcrop

6' poor m.o.
2' Lavender
1' Papery sh with pl foss
6 IN Lignite Alamo Kl.

30' Above L.B. Typical
Ledges of Chic com
Brownish grey well
X bedded indurated mic 270
ss. Upper Mir Ss.
4 feet thick.
Then top of Hill
[illegible]

SE, SE, sec 36 T 145N, R 97
rel. area G.V. not
mapped by Reed

6592 SECTION.

SE, SE, sec 1, T 145N R 97W
STARTS AT TOP of
FORT UNION.
FOR ABT 100' BELOW
THIS POINT F.V. of
TYPICAL SENTINEL BUTTE
ASPECT IS EXPOSED
IN HILLSIDE.

F.V.

0 fissile sh. clayey, ty, SA
5Y 6.5/2 SS with
some gy. v/s.

Wh. color 0 - 3.5 - 5Y 7.5/1

3.4 Lignite with Jarosite
5YR 2/3

4.3 fissile plant fossil bearing
N 7.5 shale 0

5 Lignite color. 10YR 4/2

6.1 Golden Valley Fm.
L. M. Lt. Gray

6592

fissle dicot bearing
shale N 7
W.C. N7 6F 17 with
a big break 12.2-13.
some lim Crm. layers
& typ vl sunbursts in
unit.
Leaves samp 6591 a.

8.7' do 6.1 except
silty laminae
unit now a sltst
with rel. poor frags
color N.7.5

10' unit now vfg, sa
clayey - silty
lam to mic. laminated
ss with plant stem
frags top 3' with
much carb trash.

13.4 Lignite 5YR 2/2 with
Jar.

13.7 silty clay with dicot
frags megasey 4

6591

MICA
cryptostrobus. very [illegible]
some small limonite
cem areas in color N 7

6591 b

15. 4. fissile clay with
gypsum surbursts
kaolinitic. N 7.

18, middle orange
chippy non fiss.
clay 5YR 6/8 with
some small areas of
lim. st.

Wh. 18-18.8- 10YR 7/3

205 v. sl. silty clay
5YR 7/2 with large
areas of 10YR 6/6 lim st.
Also gy ~~bk~~ & lim sph.
~~10YR 6/6~~
wh color. 18.8- 223-
10YR 8/4

6591

21. do 20.5

21.2 Vfg SS with lim. sph.
& much lim. staining,
lim filled joint cracks
5YR 7/1

Wh. color 22.3 - 27 - 5YR 8.5/1

27. SITST with clay &
Gypsum xls 5Y 7/1

Wh. color 27 - 32 5Y 7/1

31. CARBONACEOUS SITST
5YR 6/1 MASSIVE Chippy
GRADES upward with
32.6 inc. carb content
AT TO 5YR 3/1

32.8 LIGNITE
Ala Bluff 5YR 2.5/2

Wh. c. 32.8 - 42 - 5Y 7/2

Upper m[illegible]

33.7 very chipp[illegible] su[illegible]
carbonaceous 10YR6/2 sh.
with [illegible]
2-5" [illegible]
app. 2' apart.

37.5 Shs now less chipp[illegible]
with obscure pl
remains.

38.5 PLASTIC fissile bentonite
5G 5/1 sh. with
bent gypsum xls.

41.4 [illegible] to 38.5 [illegible]
5Y 5/2

42 Bentonitic silty
clay with 5YR 4/6
limonite pods in
5Y 5/3 matrix gyp [illegible]

44.6 "Calcified looking
zone with 1/2 in angl[illegible]
hardened [illegible]
(5YR 5/1) [illegible]

Same MATRIX As
some lim ST.
[SAMP 6591 e.]

45.2 Sharp TRANS TO LIT of
42'

46.7 Congl. bed AS AT 44.6
~~AC.~~

47.1 BENTONITIC clay
less PLASTIC & IS SILTY
Crust of popcorn
MATERIAL & ACICULAR
Sep X/s JUST BENTONITE

48. MASSIVE SILTY BENTONITE
Sep [illegible] CHIPPY
Lim ST. IN PLA
[illegible] CRUS.

52 fissle on SI SILTY
SHW do. 48.

52.8 SILT & MASSIVE
1/2 70 MIL BENTONITIC
CLAY.

55.5. fissile 5Y5/2
Bentonitic sh.

56.5 Becoming lighter
other, as 55.5.
color. 10YR 5/4

61.5. do 58.5 some
lim. st. color
5Y5/2

62.6 sharp out irregular
contact
with carbs some
vfg pieces incorp.
in. as pond. of sh.
vertical.

55. is vfg, yellow
limic, unind
5Y7/3 unit.

63. 55 as at 62.6
with out abs.

.6. BENTONITIC GYPSUF.
CLAY.
5Y 3/2

71.7 LIMONITE CONCS.

73 Vfg UNIND ½ to mic
SS. NIT very
CLAYEY 5Y 6/4

74 LAMINATED
fissile Vfg CLAYEY SS
~~with~~ 5Y 7/2
obscure pl rem
on BPS.

77 Covered.

83 ↓
91 Ledge of X bedded mic
to unind. Fg.
mic rather rotted
S.V. SS.
fr. col 5Y7/2
wh. col. 5Y7/2

94. Top of SECT.
CHANNEL of W.R DIS
RITUS from
MP of Kindorp.

Stone Iron

Donovan S. Carell

Hill

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